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External skin treatment agent for treating acne and seborrhoeic dermatitis, etc. - comprises aluminium magnesium silicate and/or bentonite and glycerine and/or betaine
Patent Assignee: TAISHO PHARM CO LTD (TAIS)
Number of Countries: 001 Number of Patents: 001
Patent Family:

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Priority Applications (No Type Date): JP 96286964 A 19961029
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 10130119	A		5	A61K-007/00	

Abstract (Basic): JP 10130119 A
External skin treatment agent comprises (A) aluminium magnesium silicate and/or bentonite, particularly at concentrations of 2-30 wt.% and (B) glycerine and/or betaine and particularly comprises 1 pt. wt. (A) and at least 0.2 pts. wt. (B).
USE - The agent is used for treatment of acne and seborrhoeic dermatitis and prevention of disarrangement of make up.
ADVANTAGE - The agent has a natural appearance.
Dwg.0/0
Derwent Class: A96; B05; B06; D21; E17; E33
International Patent Class (Main): A61K-007/00
International Patent Class (Additional): A61K-007/48; A61K-009/06
? S PN=JP 940548
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* NOTICES *

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CLAIMS

[Claim(s)]
[Claim 1] (A) Skin external preparations characterized by blending at least one sort chosen from at least one sort chosen from the magnesium aluminum silicate and a bentonite, the (B) glycerol, and a betaine.
[Claim 2] Skin external preparations according to claim 1 which are an acne remedy.
[Claim 3] (A) Skin external preparations according to claim 1 or 2 characterized by having consisted of at least one sort chosen from at least one sort chosen from the magnesium aluminum silicate and a bentonite, the (B) glycerol, and a betaine, and blending (B) for (A) more than the 0.2 weight section to 1 weight section.
[Claim 4] Skin external preparations according to claim 1 to 3 at least one sort of whose loadings chosen from the magnesium aluminum silicate and a bentonite are 2 - 30% of the weight of the whole pharmaceutical preparation.

[Translation done.]

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DETAILED DESCRIPTION

[Detailed Description of the Invention]
[0001]
[Industrial Application] This invention relates to the skin external preparations with which the applied part is not conspicuous in more detail about skin external preparations.
[0002]
[Description of the Prior Art] A pimple is the chronic-inflammation nature disease of the pilosebaceous system whose symptoms are shown from adolescence. As a symptom, formation of a comedo is a fundamental lesion, and inflammation is caused continuously and it shifts to a pustule. Existence of the supersecretion of sebum, the cornification failure of the hair-infundibulum section, and Propionibacterium AKUNESU is main factors at formation of a comedo. Conventionally, as external preparations of a pimple, the external preparations which blended a keratolytic drug, the germicide, the antiphlogistic, the sebum acrinia agent, the antibiotic, etc. are used. Moreover, pressure of business also of the external preparations which have blended the sebum adsorbent is carried out in order to carry out absorption removal of the sebum secreted superfluously and to heighten the curative effect of a pimple.
[0003] Moreover, also in the therapy of the seborrheic dermatitis, the external preparations which blended the sebum adsorbent for adsorption of superfluous sebum are used.
[0004] Furthermore, also in cosmetics, such as foundation, in order to prevent messy makeup, what blended the sebum adsorbent is known.
[0005]
[Problem(s) to be Solved by the Invention] Conventionally, as a sebum adsorbent blended with skin external preparations, light anhydrous silicic acid, the magnesium aluminum silicate, a bentonite, etc. are used, for example. However, the external preparations which blended them have the fault that the spreading section is conspicuous white, after pharmaceutical preparation spreading, and displeasure is given to the user about what is applied especially to the face. In order to improve the point, the acne remedy which added coloring matter, such as red ocher, and was made beige was developed, but since the color of the skin changed with people, it was what is conversely conspicuous for some men in many cases, and cannot say that the spreading section is not necessarily enough to carry out by not being conspicuous.
[0006] This invention aims at offer of the skin external preparations which blended the sebum adsorbent with which the spreading section when applying is not conspicuous white.
[0007]
[Means for Solving the Problem] In order that this invention persons may attain the above-mentioned purpose, as a result of examining many things, when the magnesium aluminum silicate or a bentonite was chosen as a sebum adsorbent and a certain kind of skin moisturizer was blended, the obtained external preparations found out that the applied part was not conspicuous white, and completed this invention.
[0008] That is, this invention is skin external preparations characterized by blending at least one sort (henceforth a "skin moisturizer component") chosen from at least one sort (henceforth a "sebum

adsorbent component") and glycerol which are chosen from the magnesium aluminum silicate and a bentonite, and a betaine.

[0009]

[Embodiment of the Invention] Although used for skin external preparations from the former, respectively, when the sebum adsorbent component and skin moisturizer component which are used in this invention were blended combining these, they were that it is not known at all conventionally that the spreading section stops being conspicuous.

[0010] Since they is components which may be blended with an acne remedy, each of sebum adsorbent components of this invention and skin moisturizer components is desirable on a dosage form design, when this invention is used for an acne remedy.

[0011]

TECHNICAL FIELD

[Industrial Application] This invention relates to the skin external preparations with which the applied part is not conspicuous in more detail about skin external preparations.

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PRIOR ART

[Description of the Prior Art] A pimple is the chronic-inflammation nature disease of the pilosebaceous system whose symptoms are shown from adolescence. As a symptom, formation of a comedo is a fundamental lesion, and inflammation is caused continuously and it shifts to a pustule. Existence of the supersecretion of sebum, the cornification failure of the hair-infundibulum section, and Propionibacterium AKUNESU is main factors at formation of a comedo. Conventionally, as external preparations of a pimple, the external preparations which blended a keratolytic drug, the germicide, the antiphlogistic, the sebum acrinia agent, the antibiotic, etc. are used. Moreover, pressure of business also of the external preparations which have blended the sebum adsorbent is carried out in order to carry out absorption removal of the sebum secreted superfluously and to heighten the curative effect of a pimple.
[0003] Moreover, also in the therapy of the seborrheic dermatitis, the external preparations which blended the sebum adsorbent for adsorption of superfluous sebum are used.
[0004] Furthermore, also in cosmetics, such as foundation, in order to prevent messy makeup, what blended the sebum adsorbent is known.

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EFFECT OF THE INVENTION

[Effect of the Invention] Offer of the acne remedy in which the spreading section is not conspicuous after spreading with this invention, a seborrheic-dermatitis remedy, the cosmetics which prevent messy makeup was attained.

[Translation done.]

TECHNICAL PROBLEM

[Problem(s) to be Solved by the Invention] Conventionally, as a sebum adsorbent blended with skin external preparations, light anhydrous silicic acid, the magnesium aluminum silicate, a bentonite, etc. are used, for example. However, the external preparations which blended them have the fault that the spreading section is conspicuous white, after pharmaceutical preparation spreading, and displeasure is given to the user about what is applied especially to the face. In order to improve the point, the acne remedy which added coloring matter, such as red ocher, and was made beige was developed, but since the color of the skin changed with people, it was what is conversely conspicuous for some men in many cases, and cannot say that the spreading section is not necessarily enough to carry out by not being conspicuous.
[0006] This invention aims at offer of the skin external preparations which blended the sebum adsorbent with which the spreading section when applying is not conspicuous white.

[Translation done.]

MEANS

[Means for Solving the Problem] In order that this invention persons may attain the above-mentioned purpose, as a result of examining many things, when the magnesium aluminum silicate or a bentonite was chosen as a sebum adsorbent and a certain kind of skin moisturizer was blended, the obtained external preparations found out that the applied part was not conspicuous white, and completed this invention.
[0008] That is, this invention is skin external preparations characterized by blending at least one sort (henceforth a "skin moisturizer component") chosen from at least one sort (henceforth a "sebum adsorbent component") and glycerol which are chosen from the magnesium aluminum silicate and a bentonite, and a betaine.
[0009]
[Embodiment of the Invention] Although used for skin external preparations from the former, respectively, when the sebum adsorbent component and skin moisturizer component which are used in this invention were blended combining these, they were that it is not known at all conventionally that the spreading section stops being conspicuous.
[0010] Since they is components which may be blended with an acne remedy, each of sebum adsorbent components of this invention and skin moisturizer components is desirable on a dosage form design, when this invention is used for an acne remedy.
[0011] Unless effectiveness is spoiled, drugs with other skin moisturizincy effects etc. can also be blended with this invention, but if light anhydrous silicic acid is blended into the skin external preparations of this invention, since the phenomenon in which the applied part is conversely conspicuous will occur, light anhydrous silicic acid cannot be blended in this invention.
[0012] this invention -- setting -- the loadings of a sebum adsorbent component -- 2- of the whole pharmaceutical preparation -- it is 5 - 15% of the weight of the range preferably 30% of the weight. It is because sebum adsorption power will become it inadequate that a color comes to be conspicuous and it is less than 2 % of the weight if the loadings of a sebum adsorbent component exceed 30% of the weight of the whole.
[0013] As for the loadings of a skin moisturizer component, in this invention, it is desirable to blend more than the 0.2 weight sections to the sebum adsorbent component 1 weight section. It is because the effectiveness which is not [be / the loadings of a skin moisturizer component / under the 0.2 weight section of a sebum adsorbent component] conspicuous in the color after spreading, and is carried out is inadequate. Here, when choosing a glycerol as a sebum moisturizer component, the combination more than the 0.3 weight section is desirable to the point whose effectiveness which is not conspicuous and carries out the color after spreading improves further to the sebum adsorbent component 1 weight section.
[0014] In the skin external preparations of this invention, at the above-mentioned indispensable component In addition, sulfur, a urea, a salicylic acid,

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EXAMPLE

[Example] Hereafter, an example and the example of a trial explain this invention to a detail further.
[0017] 5g [of example 1 ureas], 8g [of magnesium aluminum silicate], and ethylenediaminetetraacetic acid sodium 0.02g and 0.02g of citric acids were added to 67g of purified water, churning mixing was carried out, and aquosity mixture was obtained. It added to said aquosity mixture mostly warmed to this **, and agitated and mixed, and what mixed and dissolved polyoxyethylene monostearate 1g, glycyrrhizic acid K20.5g, propylene glycol 2g, betaine 3g, 8.36g [of purified water], 0.1g [of chlorhexidine hydrochloride], and myristic-acid isopropyl 1g and glyceryl monostearate 1g at about 75 degrees C independently was made into homogeneity. Sulfur 3g was added to the place which made this cool to a room temperature, churning mixing was carried out at it, and 100g of light yellow ointment-like acne remedies was obtained.
[0018] 3g [of example 2 ureas], 8g [of magnesium aluminum silicate], and ethylenediaminetetraacetic acid sodium 0.02g and 0.02g of citric acids were added to 67g of purified water, churning mixing was carried out, and aquosity mixture was obtained. It added to said aquosity mixture mostly warmed to this **, and agitated and mixed, and what mixed and dissolved polyoxyethylene-sorbitan-tristearate 1g, GURICHIRICHIN acid K20.5g, propylene glycol 1.5g, glycerol 3g, 10.16g [of purified water], and isopropyl methyl phenol 0.3g, myristic-acid isopropyl 1.5g, and glyceryl monostearate 1g at about 75 degrees C independently was made into homogeneity. Sulfur 3g was added to the place which made this cool to a room temperature, churning mixing was carried out at it, and 100g of light yellow ointment-like acne remedies was obtained.
[0019] 3g [of example 3 ureas] and bentonite 9g, ethylenediaminetetraacetic acid sodium 0.02g, and 0.02g of citric acids were added to 62g of purified water, churning mixing was carried out, and aquosity mixture was obtained. It added to said aquosity mixture mostly warmed to this **, and agitated and mixed, and what mixed and dissolved 1.5g [of polyoxyethylene hydrogenated castor oil], glycyrrhizic acid K20.5g, tetracycline 4.0g, propylene glycol 2g, betaine 3g, 9.96g [of purified water], and myristic-acid isopropyl 0.5g and glyceryl monostearate 1.5g at about 75 degrees C independently was made into homogeneity. Sulfur 3g was added to the place which made this cool to a room temperature, churning mixing was carried out at it, and 100g of light yellow ointment-like acne remedies was obtained.
[0020] 5g [of example 4 ureas], 8g [of magnesium aluminum silicate], and ethylenediaminetetraacetic acid sodium 0.02g and 0.02g of citric acids were added to 62g of purified water, churning mixing was carried out, and aquosity mixture was obtained. It added to said aquosity mixture mostly warmed to this **, and agitated and mixed, and what mixed and dissolved 1.5g [of polyoxyethylene castor oil], 0.3g [of glycyrrhetinic acid], and propylene glycol 1g, glycerol 4g, 9.66g [of purified water], and resorcinol 2g, myristic-acid isopropyl 1g, and glyceryl monostearate 2.5g at about 75 degrees C independently was made into homogeneity. Sulfur 3g was added to the place which made this cool to a room temperature, churning mixing was carried out at it, and 100g of light yellow ointment-like acne remedies was obtained.
[0021] The urea was changed into 5g in the aquosity mixture of example of comparison 1 example 2, 2g of light anhydrous silicic acid was added, and 100g of acne remedies for a comparison was obtained by

the same approach as an example 2 by the formula which changed 2.5g and purified water into 8.16g for propylene glycol further.

[0022] In the aquosity mixture of example of comparison 2 example 2, 100g of acne remedies for a comparison was obtained by the same approach as an example 2 by the formula which changed the magnesium aluminum silicate into 3g [of light anhydrous silicic acid], and bentonite 17g, changed purified water into 59g, changed propylene glycol into 5g and changed purified water into 10.66g further, respectively.

[0023] After often mixing purified water with the moisturizer and considering as homogeneity about the formula indicated to example of trial 1 tables 1-5, the sebum adsorbent was added, churning mixing was carried out, and each sample was prepared. Dark brown artificial leather was prepared and 10mg of each sample was applied to homogeneity in the field of a circle with a diameter of 15mm. The difference with the lightness of artificial leather own [dark brown] which measured the lightness (extent of whiteness) of the spreading section with the color difference meter, and measured it independently was made into the lightness difference (extent in which whiteness is conspicuous) after 1-hour desiccation. The lightness difference of each sample was shown in Tables 1-5. lightness -- a spectrum -- it measured by colorimeter CM-1000 (a trade name, Minolta Co., Ltd. make). In addition, with the naked eye, as for 3.0 or less thing, a lightness difference was hardly conspicuous.

[0024]

[Table 1]

処方	1	2	3	4	5
ケイ酸アルミニウムマグネシウム	10	10	10	10	10
グリセリン		5			
ベタイン			5		
プロピレングリコール				5	
1，3－ブチレングリコール					5
精製水	90	85	85	85	85
明度差	10.4	1.6	2.1	24.0	25.3

[0025]

[Table 2]

処方	6	7	8	9	10
ベントナイト	10	10	10	10	10
グリセリン		5			
ベタイン			5		
プロピレングリコール				5	
1，3－ブチレングリコール					5
精製水	90	85	85	85	85
明度差	18.9	0.8	2.0	23.3	24.2

[0026]

[Table 3]

処方	1	11	12	13	2
ケイ酸アルミニウムマグネシウム	10	10	10	10	10
グリセリン		1	2	3	5
精製水	90	89	88	87	85
明度差	10.4	11.6	7.7	2.1	1.6

[0027]

[Table 4]

処方	1	14	15	16	3
ケイ酸アルミニウムマグネシウム ベタイン 精製水	10 90	10 1 89	10 2 88	10 3 87	10 5 85
明度差	10.4	21.9	2.5	1.3	1.1

[0028]
[Table 5]

処方	2	17
ケイ酸アルミニウムマグネシウム 軽質無水ケイ酸 グリセリン 精製水	10 5 85	10 2 5 83
明度差	1.6	8.1

[0029] The effectiveness of this invention was proved from the result shown in Tables 1 and 2. Moreover, the result shown in Tables 3 and 4 showed the compounding ratio with desirable sebum adsorbent component and skin moisturizer component. Furthermore, when light anhydrous silicic acid was blended with coincidence by this invention from the result shown in Table 5, it turned out that the part applied conversely is conspicuous.
[0030] With the formula of example of trial 2 example 2, using the examples 1 and 2 of a comparison, 20mg of each sample was applied to homogeneity in the field of a circle with a diameter [of five healthy persons' frame] of 15mm, the lightness of the spreading section was measured with the color difference meter after 1-hour desiccation, and the difference with the lightness of the skin before spreading was made into the lightness difference. The lightness difference (extent in which whiteness is conspicuous) of each sample was shown in Table 6.
[0031]
[Table 6]

被験者	実施例2	比較例1	比較例2
A	0.1	4.4	7.0
B	3.6	9.0	10.5
C	0.6	4.2	8.1
D	2.9	3.8	11.9
E	1.0	10.8	10.7
平均	1.6	6.4	9.6

[Translation done.]

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(54)【発明の名称】　皮膚外用剤

(57)【要約】
【課題】皮脂吸着剤成分を配合した皮膚外用剤は、塗布したときに塗布部が白く目立つ欠点があった。
【解決手段】（Ａ）ケイ酸アルミニウムマグネシウムおよびベントナイトから選ばれる少なくとも１種、および（Ｂ）グリセリンおよびベタインから選ばれる少なくとも１種を配合したことを特徴とする皮膚外用剤。

【特許請求の範囲】
【請求項１】（Ａ）ケイ酸アルミニウムマグネシウムおよびベントナイトから選ばれる少なくとも１種、および（Ｂ）グリセリンおよびベタインから選ばれる少なくとも１種を配合したことを特徴とする皮膚外用剤。
【請求項２】にきび治療薬である請求項１に記載の皮膚外用剤。
【請求項３】（Ａ）ケイ酸アルミニウムマグネシウムおよびベントナイトから選ばれる少なくとも１種、および（Ｂ）グリセリンおよびベタインから選ばれる少なくとも１種からなり、（Ａ）を１重量部に対し、（Ｂ）を０．２重量部以上配合したことを特徴とする請求項１または２に記載の皮膚外用剤。
【請求項４】ケイ酸アルミニウムマグネシウムおよびベントナイトから選ばれる少なくとも１種の配合量が製剤全体の２～３０重量％である請求項１～３のいずれかに記載の皮膚外用剤。
【発明の詳細な説明】
【０００１】
【産業上の利用分野】本発明は、皮膚外用剤に関し、さらに詳しくは、塗布した部分が目立たない皮膚外用剤に関する。
【０００２】
【従来の技術】にきびは、思春期より発症する毛包脂腺系の慢性炎症性疾患である。症状としては、面皰の形成が基本的な病変であり、続いて炎症が惹起され膿疱へと移行する。面皰の形成には、皮脂の分泌亢進、毛漏斗部の角化障害、プロピオニバクテリウムアクネスの存在が主要な要因となっている。従来、にきびの外用剤としては、角質溶解剤、殺菌剤、消炎剤、皮脂分泌抑制剤、抗生剤などを配合した外用剤が使用されている。また、過剰に分泌される皮脂を吸収除去してにきびの治療効果を高める目的で、皮脂吸着剤を配合している外用剤も繁用されている。
【０００３】また、脂漏性皮膚炎の治療においても、過剰な皮脂の吸着のために皮脂吸着剤を配合した外用剤が使用される。
【０００４】さらに、ファンデーションなどの化粧品においても、化粧崩れを防止するために皮脂吸着剤を配合したものが知られている。
【０００５】
【発明が解決しようとする課題】従来、皮膚外用剤に配合する皮脂吸着剤としては、例えば軽質無水ケイ酸、ケイ酸アルミニウムマグネシウム、ベントナイトなどが使われている。しかし、それらを配合した外用製剤は、製剤塗布後に塗布部が白く目立つという欠点があり、特に顔面に塗布するものについては使用者に不快感を与えている。その点を改良するために、ベンガラなどの色素を添加して、肌色にしたにきび治療薬なども開発されているが、肌の色は人によって異なるため、人によっては逆に目立ってしまう場合も多く、塗布部を目立たなくするには必ずしも十分とはいえないものであった。
【０００６】本発明は、塗布したときの塗布部が白く目立たない、皮脂吸着剤を配合した皮膚外用剤の提供を目的とする。
【０００７】
【課題を解決するための手段】本発明者らは、上記目的を達成するため種々検討した結果、皮脂吸着剤としてケイ酸アルミニウムマグネシウムまたはベントナイトを選択した場合に、ある種の皮膚保湿剤を配合すると、得られた外用剤は塗布した部分が白く目立たないことを見いだし本発明を完成した。
【０００８】すなわち本発明はケイ酸アルミニウムマグネシウムおよびベントナイトから選ばれる少なくとも１種（以下、「皮脂吸着剤成分」という）ならびにグリセリンおよびベタインから選ばれる少なくとも１種（以下、「皮膚保湿剤成分」という）を配合したことを特徴とする皮膚外用剤である。
【０００９】
【発明の実施の形態】本発明において使用される皮脂吸着剤成分および皮膚保湿剤成分は、それぞれ皮膚外用剤に従来から使用されているものではあるが、これらを組み合わせて配合すると塗布部が目立たなくなるということは従来全く知られていないことであった。
【００１０】本発明の皮脂吸着剤成分と皮膚保湿剤成分は、いずれもにきび治療薬に配合されることがある成分であるので、本発明をにきび治療薬に用いると製剤設計上好ましい。
【００１１】本発明には、効果を損なわない限り他の皮膚保湿効果を持つ薬剤などを配合することもできるが、本発明の皮膚外用剤中に軽質無水ケイ酸を配合してしまうと、塗布した部分が逆に目立ってしまう現象が発生するため、本発明においては軽質無水ケイ酸は配合することができない。
【００１２】本発明において皮脂吸着剤成分の配合量は、製剤全体の２～３０重量％、好ましくは、５～１５重量％の範囲である。皮脂吸着剤成分の配合量が全体の３０重量％を越えると色が目立つようになってしまい、２重量％未満であると皮脂吸着力が不十分になってしまうからである。
【００１３】本発明において皮膚保湿剤成分の配合量は、皮脂吸着剤成分１重量部に対し、０．２重量部以上配合することが好ましい。皮膚保湿剤成分の配合量が皮脂吸着剤成分の０．２重量部未満であると塗布後の色を目立たなくする効果が不十分だからである。ここで、皮脂保湿剤成分としてグリセリンを選択するときは、塗布後の色を目立たなくする効果がさらに向上する点から、皮脂吸着剤成分１重量部に対して０．３重量部以上の配合が好ましい。
【００１４】本発明の皮膚外用剤には、上記必須成分に

加えて、イオウ、尿素、サリチル酸、ビタミンA酸、レゾルシン、チオキソロン、ジベンゾチオフェンなどの角質溶解剤、イソプロピルメチルフェノール、ヒノキチオール、トリクロサン、クロルヘキシジン塩酸塩、塩化デカリニウム、トリクロロカルバニリド、ベルベリン、塩化ベンザルコニウム、チモール、感光素201号などの殺菌剤、グリチルレチン酸、グリチルリチン酸、グリチルリチン酸ジカリウム、アラントイン、酸化亜鉛、イブプロフェンピコノール、インドメタシン、メフェナム酸、イプシロンアミノカプロン酸、トラネキサム酸などの抗炎症剤、テトラサイクリン、エリスロマイシン、クラリスロマイシン、硫酸ゲンタマイシン、ナジフロキサシン、クリンダマイシンなどの抗生物質、エストラジオール、酢酸ヒドロコルチゾン、酢酸デキサメタゾンフルオロシノロンアセトニドなどのステロイド、スピロノラクトンなどの皮脂分泌抑制剤、ジグリセリン、エチレングリコール、1，3－ブチレングリコール、プロピレングリコール、ソルビトール、マンニトール、ヒアルロン酸などの角質保湿剤、ビタミンAパルミチン酸エステル、ビタミンD2、ビタミンD3，ビタミンE酢酸エステルなどのビタミン類、パルミチン酸イソプロピル、ミリスチン酸イソプロピル、ベンジルアルコール、脂肪酸トリグリセリドなどの油剤、ポリオキシエチレンソルビタン脂肪酸エステル、ソルビタン脂肪酸エステル、ポリオキシエチレン脂肪酸エステル、ポリオキシエチレンヒマシ油誘導体、グリセリルモノ脂肪酸エステルなどの非イオン界面活性剤、エチレンジアミン四酢酸、ブチルヒドロキシルアニソール、ブチルヒドロキシトルエンなどの抗酸化剤、カオリンなどの懸濁化剤、クエン酸、アルギニンなどのｐＨ調節剤などを本発明の効果を損なわない範囲で適宜配合することができる。ここで、本発明において薬剤としてイオウを選択すると、塗布したときにイオウの色が目立たなくなるという特徴もあるので、本発明をにきび治療薬とするときは薬剤としてイオウを選択することが好ましい。

【0015】本発明で皮膚外用剤とは液剤、軟膏剤、クリーム剤、ローション剤、乳剤などの通常の剤型であり、それらは外用剤製造の通常の方法で製造することができる。そのときには本発明の効果を損なわない範囲で通常使用される成分を配合することができる。

【0016】

【実施例】以下、実施例および試験例により本発明をさらに詳細に説明する。

【0017】実施例1

尿素5ｇ、ケイ酸アルミニウムマグネシウム8ｇ、エチレンジアミン四酢酸ナトリウム0．02ｇ、クエン酸0．02ｇを精製水67ｇに加え、撹拌混合して水性混合物を得た。別にポリオキシエチレンモノステアレート1ｇ、グリチルリチン酸$K_2$0．5ｇ、プロピレングリコール2ｇ、ベタイン3ｇ、精製水8．36ｇ、塩酸クロルヘキシジン0．1ｇ、ミリスチン酸イソプロピル1ｇ、グリセリルモノステアレート1ｇを約75℃で混合、溶解したものを、ほぼ同温に加温した前記水性混合物に加えて撹拌、混合し、均一とした。これを室温まで冷却させたところに、イオウ3ｇを加えて撹拌混合し、淡黄色軟膏状のにきび治療薬100ｇを得た。

【0018】実施例2

尿素3ｇ、ケイ酸アルミニウムマグネシウム8ｇ、エチレンジアミン四酢酸ナトリウム0．02ｇ、クエン酸0．02ｇを精製水67ｇに加え、撹拌混合して水性混合物を得た。別にポリオキシエチレンソルビタントリステアレート1ｇ、グリチリチン酸$K_2$0．5ｇ、プロピレングリコール1．5ｇ、グリセリン3ｇ、精製水10．16ｇ、イソプロピルメチルフェノール0．3ｇ、ミリスチン酸イソプロピル1．5ｇ、グリセリルモノステアレート1ｇを約75℃で混合、溶解したものを、ほぼ同温に加温した前記水性混合物に加えて撹拌、混合し、均一とした。これを室温まで冷却させたところに、イオウ3ｇを加えて撹拌混合し、淡黄色軟膏状のにきび治療薬100ｇを得た。

【0019】実施例3

尿素3ｇ、ベントナイト9ｇ、エチレンジアミン四酢酸ナトリウム0．02ｇ、クエン酸0．02ｇを精製水62ｇに加え、撹拌混合して水性混合物を得た。別にポリオキシエチレン硬化ヒマシ油1．5ｇ、グリチルリチン酸$K_2$0．5ｇ、テトラサイクリン4．0ｇ、プロピレングリコール2ｇ、ベタイン3ｇ、精製水9．96ｇ、ミリスチン酸イソプロピル0．5ｇ、グリセリルモノステアレート1．5ｇを約75℃で混合、溶解したものを、ほぼ同温に加温した前記水性混合物に加えて撹拌、混合し、均一とした。これを室温まで冷却させたところにイオウ3ｇを加えて撹拌混合し、淡黄色軟膏状のにきび治療薬100ｇを得た。

【0020】実施例4

尿素5ｇ、ケイ酸アルミニウムマグネシウム8ｇ、エチレンジアミン四酢酸ナトリウム0．02ｇ、クエン酸0．02ｇを精製水62ｇに加え、撹拌混合して水性混合物を得た。別にポリオキシエチレンヒマシ油1．5ｇ、グリチルレチン酸0．3ｇ、プロピレングリコール1ｇ、グリセリン4ｇ、精製水9．66ｇ、レゾルシン2ｇ、ミリスチン酸イソプロピル1ｇ、グリセリルモノステアレート2．5ｇを約75℃で混合、溶解したものを、ほぼ同温に加温した前記水性混合物に加えて撹拌、混合し、均一とした。これを室温まで冷却させたところにイオウ3ｇを加えて撹拌混合し、淡黄色軟膏状のにきび治療薬100ｇを得た。

【0021】比較例1

実施例2の水性混合物において尿素を5ｇに変え、軽質無水ケイ酸2ｇを追加し、さらにプロピレングリコールを2．5ｇおよび精製水を8．16ｇに変えた処方で実

施例２と同様の方法により比較用にきび治療薬１００ｇを得た。

【００２２】比較例２

実施例２の水性混合物において、ケイ酸アルミニウムマグネシウムを軽質無水ケイ酸３ｇおよびベントナイト１７ｇに変え、精製水を５９ｇに変え、さらにプロピレングリコールを５ｇ、精製水を１０．６６ｇにそれぞれ変えた処方で実施例２と同様の方法により比較用にきび治療薬１００ｇを得た。

【００２３】試験例１

表１～５に記載した処方について、保湿剤と精製水をよく混合し、均一とした後、皮脂吸着剤を加えて撹拌混合し、各試料を調製した。こげ茶色の人工皮革を用意し、直径１５ｍｍの円の面に各試料１０ｍｇを均一に塗布した。１時間乾燥後、塗布部の明度（白さの程度）を色差計にて測定し、別に測定したこげ茶色の人工皮革自身の明度との差を明度差（白さの目立つ程度）とした。各試料の明度差を表１～５に示した。明度は、分光測色計ＣＭ－１０００（商品名、ミノルタ社製）により測定した。なお、明度差が３．０以下のものは肉眼ではほとんど目立たなかった。

【００２４】

【表１】

処方	1	2	3	4	5
ケイ酸アルミニウムマグネシウム	10	10	10	10	10
グリセリン		5			
ベタイン			5		
プロピレングリコール				5	
1，3－ブチレングリコール					5
精製水	90	85	85	85	85
明度差	10.4	1.6	2.1	24.0	25.3

【００２５】

【表２】

処方	6	7	8	9	10
ベントナイト	10	10	10	10	10
グリセリン		5			
ベタイン			5		
プロピレングリコール				5	
1，3－ブチレングリコール					5
精製水	90	85	85	85	85
明度差	18.9	0.8	2.0	23.8	24.2

【００２６】

【表３】

処方	1	11	12	13	2
ケイ酸アルミニウムマグネシウム	10	10	10	10	10
グリセリン		1	2	3	5
精製水	90	89	88	87	85
明度差	10.4	11.6	7.7	2.1	1.6

【００２７】

【表４】

処方	1	14	15	16	3
ケイ酸アルミニウムマグネシウム	10	10	10	10	10
ベタイン		1	2	3	5
精製水	90	89	88	87	85
明度差	10.4	21.9	2.5	1.3	1.1

【００２８】

【表５】

処方	2	17
ケイ酸アルミニウムマグネシウム	10	10
軽質無水ケイ酸		2
グリセリン	5	5
精製水	85	83
明度差	1.6	8.1

【００２９】表１、２に示した結果から本発明の効果が証明された。また、表３、４に示した結果から皮脂吸着剤成分と皮膚保湿剤成分の好ましい配合比が判った。さらに、表５に示した結果から本発明では同時に軽質無水ケイ酸を配合すると逆に塗布した部分が目立つことが判った。

【００３０】試験例２

実施例２の処方と、比較例１、２を用いて、健常人５名の額の直径１５ｍｍの円の面に各試料２０ｍｇを均一に塗布し、１時間乾燥後、塗布部の明度を色差計にて測定

し、塗布前の皮膚の明度との差を明度差とした。各試料の明度差（白さの目立つ程度）を表６に示した。

【００３１】

【表６】

被験者	実施例２	比較例１	比較例２
A	０．１	４．４	７．０
B	３．６	９．０	１０．５
C	０．６	４．２	８．１
D	２．９	３．８	１１．９
E	１．０	１０．８	１０．７
平均	１．６	６．４	９．６

【００３２】

【発明の効果】本発明により塗布後に塗布部が目立たないにきび治療薬、脂漏性皮膚炎治療薬、化粧崩れを防止する化粧品などの提供が可能になった。